

AN 1982:20985 CAPLUS  
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TI Laminates for **automobile** ceilings  
PA Toa Gosei Chemical Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 6 pp.  
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JP 56-118816

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 56118816	A2	19810918	JP 1980-22225	19800226
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AB A ceiling material for **automobiles** is prepd. from a thermoplastic resin base sheet which is coated with a thermoplastic resin **powder adhesive** by heating the sheet to melt and activate the adhesive, laminating the base material with a surface covering material, and molding the laminate without excessive heat.

Thus,

an ABS copolymer [9003-56-9] sheet (3 mm) was coated with a polyester adhesive PES-110P (m.p. 110.degree., diam. .gtoreq.200 .mu.) to 60 g/m2. After IR irradiation to melt the adhesive, the sheet was laminated with a surface layer laminate comprising soft PVC [9002-86-2] and a polyether urethane foam at 20.degree. and 1 kg/cm2 for 20 s. The base sheet had no apparent shrinkage or warping after being coated with the adhesive, and after pressing there were no such signs on the base material on the surface layer. The laminate had peel strength 0.9 kg/25 mm width at 20.degree. and 0.6 kg/25 mm width at 80.degree..

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L4: Entry 1 of 1

File: DWPI

Sep 18, 1981

DERWENT-ACC-NO: 1981-80678D  
DERWENT-WEEK: 198144  
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**TITLE:** Moulded laminated body for car roof mfr. - is prepd. by applying specified surface laminate to thermoplastics synthetic resin using adhesive

**PATENT-ASSIGNEE:**

ASSIGNEE

TOA GOSEI CHEM IND LTD

CODE

TOAG

**PRIORITY-DATA:** 1980JP-0022225 (February 26, 1980)

**PATENT-FAMILY:**

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 56118816 A	September 18, 1981		006	
JP 87023654 B	May 25, 1987		000	

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**INT-CL (IPC):** B29C 17/02; B29C 27/10; B29C 43/18; B29C 65/40; B29L 31/58; B32B 31/20; B60R 13/02

**ABSTRACTED-PUB-NO:** JP 56118816A

**BASIC-ABSTRACT:**

Thermoplastic pulverous adhesive agent exhibits adhesion properties by melting a base material consisting of a sheet of a thermoplastic synthetic resin at the hot-moulding temp. and applying the adhesive to the base material. The adhesive is melted by heating it to the hot-moulding temp. of the base material and a surface material is applied onto the latter via the adhesive in the melted state. The prod. is press-moulded in the cold to perform adhesion of the base material onto the surface material. The obtd. laminated prod. is used as roof material for automobile.

There is no fear of environmental contamination; the time for moulding is reduced because of thermoplastic resin sheet having superior mouldability is used; the moulding of the base material and the adhesion of the base material are performed in one stage. Thus productivity is markedly improved.

Pref. base material of the sheet is polystyrene, impact-resistant polystyrene blended with synthetic rubber, acrylonitrile-styrene copolymer, acrylonitrile-styrene-butadiene copolymer, styrene-maleic anhydride copolymer, high density polyethylene, etc. having hot-moulding temp. not more than 200 deg.C. Pref. surface material is a material prepd. by laminating a cushion layer consisting of soft polyurethane foam, polyethylene foam etc. on a surface decorating layer consisting of soft PVC resin sheet, or fabric sheet, etc. Pref. adhesive for bonding the surface material to the thermoplastic resin sheet is adhesive obtd. by copolymerising ca. 1-10C alkylene glycol such as ethylene glycol with a dibasic acid such as terephthalic acid, etc., adhesive obtd. by copolymerising polyamide such as nylon 11 etc. with other nylon such as nylon 6 etc., adhesive obtd. by polymerising olefin